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Pulpwood Production in the Northeast—1997

Richard H. Widmann
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Abstract

This annual assessment of pulpwood production and consumption for the 13 states in the Northeast shows that pulpwood production increased by 4.9 percent from 1996 to 1997. Production comprised 6.8 million cords of roundwood and the equivalent of 2.5 million cords of wood residues that were produced and used for pulp. Over the last decade, in the Northeastern States, pulpwood production has risen slowly, with 1997 production only 5.3 percent above the 1987 level. Consumption of pulpwood at mills in the Northeast remained at a high level (9.5 million cords). The harvesting of trees (roundwood) for pulp was most intense in Maine, where an average 17.5 cubic feet of wood was harvested per acre of timberland in 1997.

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Highlights

- ➔ Pulpwood production in the Northeast increased by 4.9 percent from 1996 to 1997.
- ➔ After declining in 1996 pulpwood production in the New England States recovered in 1997 to nearly the record level reached in 1995.
- ➔ The harvest of both hardwoods and softwoods used in pulpwood production increased. Increases in hardwood production were a continuation of past trends, while the increase in softwoods did not follow the past trend of decreasing production.
- ➔ Roundwood production in Maine is composed of 21 percent spruce and fir, 11 percent hemlock and tamarack, 14 percent pine, and 54 percent hardwoods.
- ➔ The Northeastern region is a net importer. Imports account for 3.1 percent of total pulpwood consumption.
- ➔ Maine pulpmills consumed 1 million more cords than were harvested in the state.
- ➔ Harvesting was most intensive in Maine, where the pulpwood harvest averaged 17.5 cubic feet per acre of timberland in 1997.

Introduction

This report presents annual pulpwood production and consumption data for the 13 Northeastern States¹ during 1997. Data were obtained by a 100-percent canvass of pulpmills in the Northeast (Fig. 1) that use wood as a basic raw material to make pulp for the production of paper, insulation board, and hardboard products. Shipments outside of the Northeast are traced by exchanging information with neighboring Forest Service Experiment Stations that conduct similar canvasses, and by canvassing pulpmills in adjacent Canadian provinces.

These statistics are based on mill receipts of roundwood and manufacturing plant residues.² These receipts are subject to year-to-year fluctuations in wood inventory. Mill receipts of pulpwood from roundwood are reported by the county in which the harvest occurred. However, mills often do not have complete records of the origin of the wood they receive. In such cases, they are asked to provide a best estimate of where the wood was harvested. Because of these difficulties in tracing the harvest to the county of origin, reported state-level data are assumed to be more accurate than those for individual counties. Pulpwood from residues is reported for the state in which the residues were produced. Some of the logs from which the residues were generated probably were harvested in states other than the one in which they were processed. Therefore, the volume of pulpwood produced from residues in a state should not be linked directly to the sawlog harvest for the state.

Total Production

In 1997, pulpwood production for the 13 Northeastern States totaled 9.3 million cords (Table 1). This represented a 4.9-percent increase over 1996 production and was only 1 percent less than the record level reached in 1995. Over the last decade in the Northeast, pulpwood production has risen slowly, with 1997 production only 5.3 percent above the 1987 level (Fig. 2). During this period, pulpwood production levels generally have remained high despite weak prices for paper products. The rise in production during 1997 coincides with a rise in prices for paper products. In New England, production recovered in 1997, increasing by 9.7 percent over 1996 levels (Fig. 3).

During 1997, roundwood comprised 73 percent of total production and manufacturing residues 27 percent. Roundwood includes logs, bolts, and whole-tree-chips generated from harvesting trees. Typically in the Northeast, roundwood used for pulp is produced from poor-quality trees or from the tops and branches of trees harvested for sawlogs. The Northeast differs from the Southern States in that little pulpwood is grown in plantations.

Manufacturing residues are byproducts generated in the conversion of logs into lumber and other products. These include chips made from sawmill slabs and edgings and veneer cores. The manufacturing residue category also includes a small amount of sawdust and chipped pallets that were used to make pulp.

Historically, there have been few alternative markets for the low-quality wood used to make pulp. Uses that compete with pulpmills for wood include particle-board plants and others that make reconstituted wood products; the pallet industry for low-quality hardwood logs; stud mills in Maine for small-diameter softwood logs; and wood-fueled industrial boilers, particularly during times when energy cost are high. Except for boiler fuel, these uses generally have increased in the Northeastern States. In some areas, the local market for firewood also competes with pulpwood.

Roundwood

Roundwood production for use as pulpwood reached 6.8 million cords in 1997, an increase of 391,300 cords over 1996 and a record high. After declining in 1996 from its previous high set in 1995, roundwood production in 1997 rose by 6.1 percent. Roundwood from softwood species accounted for 37 percent of all roundwood and increased by 58,900 cords (2.4 percent) to 2.5 million cords. Hardwood roundwood increased by 332,400 cords (8.5 percent) to 4.2 million cords. The increase in hardwood production was a continuation of the trend toward increasing production from hardwoods. The increase in softwoods did not follow the trend toward decreasing softwood production. Pulpwood production from softwoods has been trending downward since 1984. Most of the decrease in 1996 production and increase in 1997 occurred in New England.

In 1997, production of round wood in New England increased by 11 percent due to increases in both softwoods and hardwoods. The 2.5 million cords of hardwood pulpwood harvested set records for in both quantity and share (56 percent). This was a continuation of the trend toward increased utilization of hardwood species. Red maple, an abundant species with limited markets, has increasingly been used for pulp. Many pulpmills in New England have adapted to limited supplies of softwoods by increasing hardwoods utilization. The production of softwood

¹In previous reports, Kentucky was included in Northeastern region. Beginning in 1994, Kentucky was moved to the Southern region. For this report, trend data for the Northeast have been modified to reflect this change.

²Whole-tree chips and logs chipped at satellite chipping facilities are included as roundwood.

roundwood increased to 2.0 million cords. Production of softwood roundwood in New England peaked in 1984 at 2.6 million cords. In Maine, spruce and fir accounted for only 21 percent of the pulpwood roundwood produced (Table 6). Other species and their portion of the total roundwood were hemlock and tamarack (11 percent), pine (14 percent), and hardwood (54 percent). Until 1983, spruce and fir annually accounted for more than half of the pulpwood harvested in Maine.

Pulpwood from Manufacturing Residues

High levels of hardwood lumber production in the Northeast have resulted in a greater amount of manufacturing residues available for use as pulpwood. During 1997, pulpwood from sawmills and other primary processors of logs in the Northeastern States was equivalent to 2.5 million cords (Table 3); 53 percent of these residues were produced from hardwood species. As hardwood lumber production has increased, pulpmills have relied more heavily on residues as a source of wood. In West Virginia, manufacturing residues accounted for 61 percent of the pulpwood produced in the state. The record level of residue production in West Virginia (414,200 cord equivalents) is an indication of the robust lumber industry in that state. Residues also account for a large portion of the pulpwood produced in Ohio, Maryland, and Pennsylvania—45, 40, and 34 percent respectively. In New England, residues increased by 5.3 percent. An increase of nearly 10 percent in softwood residue production offset a drop in hardwood residues. In Maine, sawmills compete with pulpmills for small-diameter softwood logs. These sawmills sell most of their residues to pulpmills in the state.

Consumption

Northeast mills continued high levels of pulpwood consumption (Tables 4, 5, 14). From 1988 to 1997 receipts rose from 8.9 to 9.5 million cords (4 percent). In 1997, Northeast pulpmills received 2.7 million cords of softwood roundwood, 4.4 million cords of hardwood roundwood, and

the equivalent of 2.4 million cords of chips produced from manufacturing residues. Imports into the region accounted for 10.2 percent of the receipts. These imports outpaced exports by 187,100 cords (Table 15). Mills in Maine and Maryland received most of the shipments into the region. Maine pulpmills consumed 1 million cords more than were produced in the state. In addition to receiving wood from other states, Maine imported 464,400 cords of roundwood and the equivalent of 166,400 cords of residues from Canada (Tables 16-17). In recent years, Maine has imported increasing amounts of wood. A large portion of the imported residues was produced from Maine logs processed at Canadian sawmills just across the border. Imports helped mitigate tight wood supplies in Maine.

Harvesting Intensity

The average annual pulpwood harvest per acre of timberland reflects of the intensity of pulpwood harvesting (Table 18). The highest harvesting rate was in Maine, which averaged 17.5 cubic feet of roundwood harvested per acre of timberland. New Hampshire, Vermont, and Maryland averaged of 9.8, 7.4, and 7.0 cubic feet harvested per acre, respectively. Rates were low in West Virginia (1.9 cubic feet), Ohio (3.1), Pennsylvania (4.3) and New York (4.1).

The average annual net growth on timberland in the Northeast is roughly 38 cubic feet of growing-stock volume per acre. The percentage of this average growth used for pulpwood roundwood ranges from 46 in Maine to zero in Rhode Island, where no pulpwood harvesting was reported in 1997. Pulpwood harvesting averaged 17.5 percent of the growth across the Northeast. Actual data for a specific area within a state may vary considerably because pulpwood represents only part of the total harvest. For example, it does not include the harvesting of sawlogs that varies across the region. Pulpmills also use wood from other than the growing-stock portion of the trees, e.g., branches, treetops less than 4 inches in diameter, and saplings. This material is not included in growing-stock growth data.



- | | |
|--|--|
| 1. Bucksport, ME Champion International Corp. | 17. Deferiet, NY Champion International Corp. |
| 2. E. Millinocket, ME Great Northern Paper, Inc. | 18. Deposit, NY Norbord Industries |
| 3. Jay, ME International Paper Co. | 19. Glens Falls, NY Finch-Pruyn and Company |
| 4. Lincoln, ME Lincoln Pulp and Paper Co. | 20. Lyons Falls, NY Lyons Falls Pulp and Paper, Inc. |
| 5. Lisbon Falls, ME Masonite Corp. | 21. Ticonderoga, NY International Paper Co. |
| 6. Madison, ME Madison Paper Industries | 22. Chillicothe, OH The Mead Corp. |
| 7. Millinocket, ME Great Northern Paper, Inc. | 23. Circleville, OH Jefferson Smurfit Corp. |
| 8. Old Town, ME Fort James Corp. | 24. Coshocton, OH Stone Container Corp. |
| 9. Rumford, ME The Mead Corp. | 25. Milan, OH Certainteed Corp. |
| 10. Hinckley, ME S.D Warren Company | 26. Erie, PA International Paper Co. |
| 11. Westbrook, ME S.D. Warren Company | 27. Johnsonburg, PA Willamette Industries, Inc. |
| 12. Woodland, ME Georgia-Pacific Corp. | 28. Mehoopany, PA Proctor and Gamble Co. |
| 13. Luke, MD Westvaco Corp. | 29. Roaring Spring, PA Appleton Papers, Inc. |
| 14. Berlin, NH Crown Vantage Corp. | 30. Spring Grove, PA The P. H. Glatfelter Co. |
| 15. Groveton, NH Groveton Paper Board, Inc. | 31. Sunbury, PA Jim Walter Corp. |
| 16. Corinth, NY International Paper Co. | 32. Towanda, PA Masonite Corp. |

Figure 1.—Locations and names of mills receiving pulpwood in the Northeastern States.

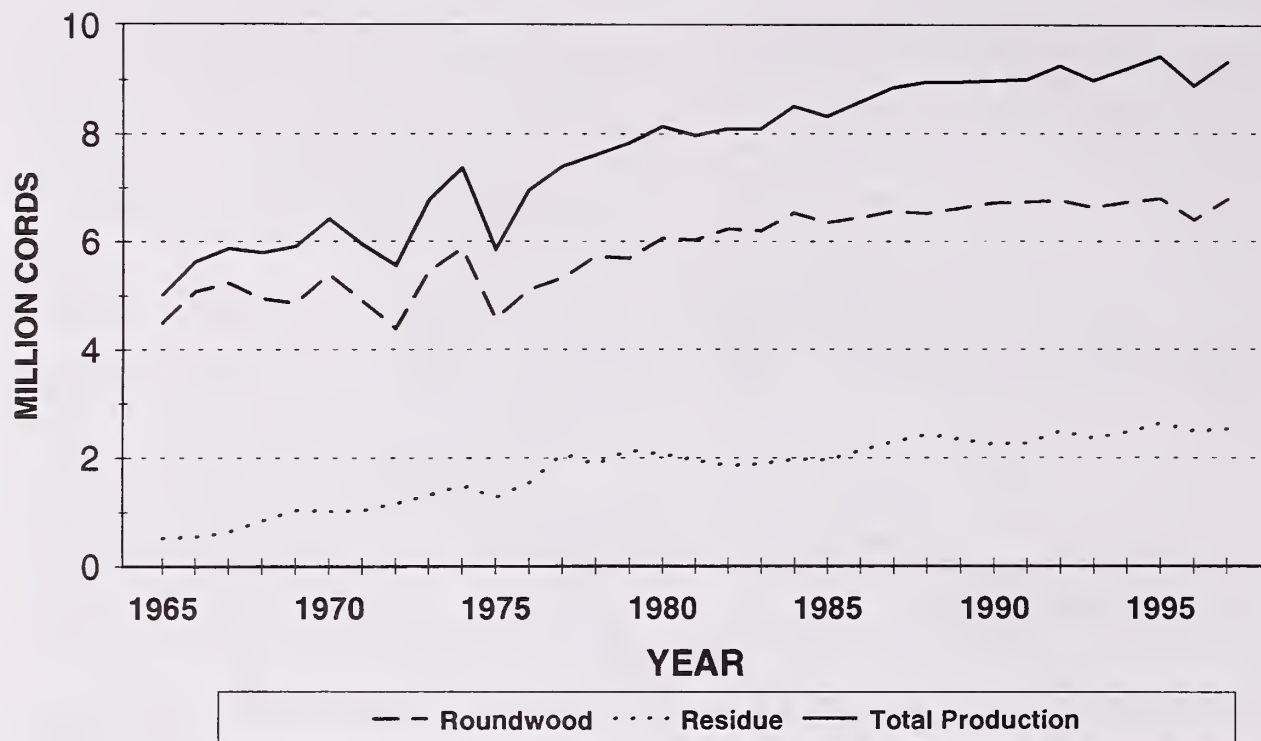


Figure 2.—Total pulpwood, roundwood, and manufacturing residue production in the Northeast, 1965-97.

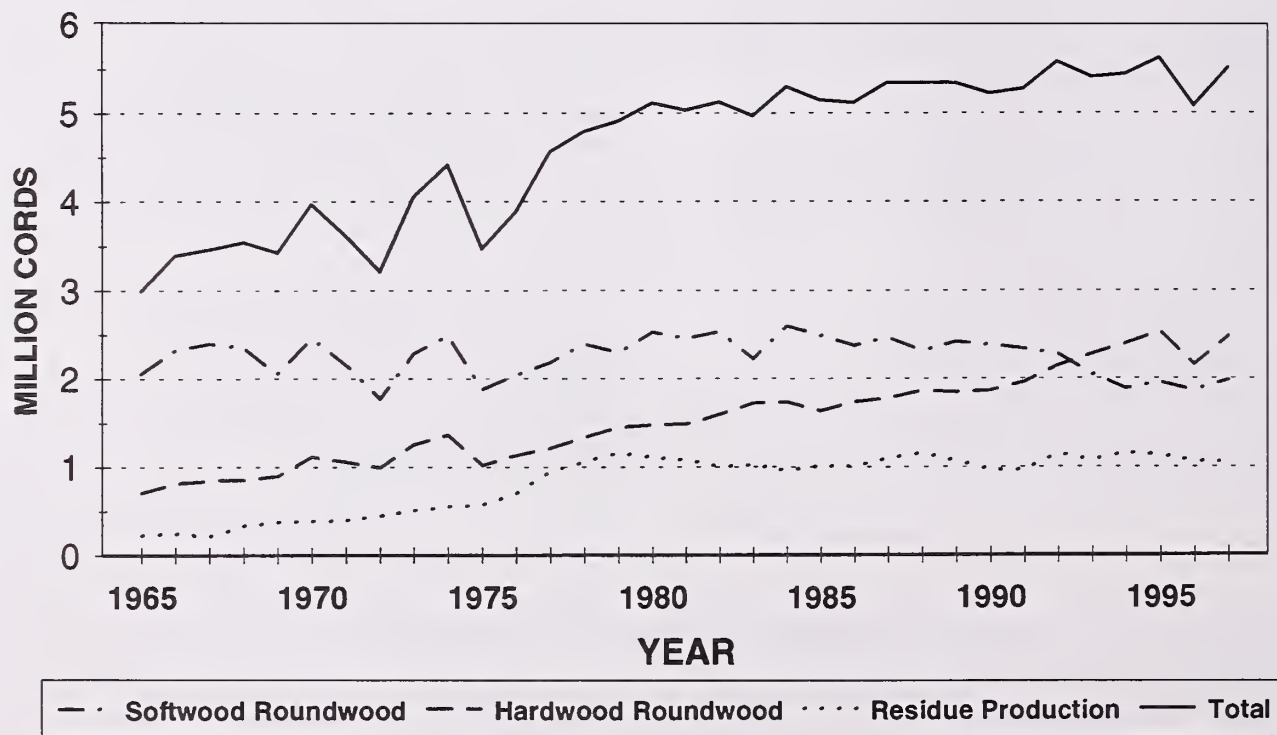


Figure 3.—Pulpwood production in New England, 1965-97.

Appendix

Definition of Terms

Cord. See Standard cord.

Cord equivalent. A unit of measure applied to forms of wood other than roundwood, such as chips, slabs, edgings, and other manufacturing residues, and equal to 85 cubic feet of solid wood, or 1 cord.

Manufacturing residues. Wood materials, such as sawmill slabs and edgings, sawdust, veneer clippings and cores, post and pole trimming, and pulp screening generated from the manufacture of roundwood products.

Pulpwood. Roundwood, whole-tree chips, or manufacturing residues that are used for the production of wood pulp.

Pulpwood production. Roundwood and manufacturing plant residues that are used for the production of wood pulp.

Pulpwood receipts. Pulpwood received at wood-pulp mills. These can originate from outside the state or region.

Pulpwood imports. Pulpwood receipts originating from outside the Northeast (14-state region).

Roundwood products. Logs, bolts, total-tree chips, mine timbers, fenceposts, poles, and similar timber products generated by harvesting trees for industrial or consumer use.

Standard cord. A unit of measure for stacked bolts of wood, encompassing 128 cubic feet of wood, bark, and air space. In the Northeast, the measure refers to a stack of wood containing 85 cubic feet or 2.41 cubic meters, of solid wood. A standard cord commonly is referred to as a cord, as in this report. This is not the same as a face cord, commonly used in firewood marketing.

Whole-tree chip. Unbarked wood chips generated from the aboveground portion of a tree, including bolewood, limbs, and leaves.

Metric Equivalents

One standard cord = 85 cubic feet (solid wood) = 2.41 cubic meters (solid wood)

One cubic foot = 28,317 cubic centimeters = 0.028 cubic meter

Conversion Factors Used for Green Roundwood

1 ton spruce-fir = 0.5556 cord

1 ton hemlock-tamarack = 0.5000 cord

1 ton pine (New England, New York, and Canada) = 0.5263 cord

1 ton aspen—yellow-poplar = 0.5263 cord

1 ton oak-hickory = 0.3571 cord

1 ton other hardwoods = 0.3846 cord

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Table 1.—Total production of pulpwood in the Northeast, by state and source, 1997, and totals for 1996 and 1995

| (In thousands of standard cords) ^a | | | |
|---|-----------------|--------------------|-------------|
| State | From round wood | From manufacturing | All sources |
| Connecticut | 12.5 | 0.6 | 13.1 |
| Delaware | 29.7 | 3.1 | 32.8 |
| Maine | 3,487.8 | 883.8 | 4,371.6 |
| Maryland | 199.3 | 132.3 | 331.6 |
| Massachusetts | 17.6 | 8.0 | 25.6 |
| New Hampshire | 555.6 | 143.4 | 699.0 |
| New Jersey | 13.4 | 7.8 | 21.2 |
| New York | 736.7 | 208.7 | 945.4 |
| Ohio | 272.1 | 223.8 | 495.9 |
| Pennsylvania | 809.5 | 420.5 | 1,230.0 |
| Rhode Island | * | — | * |
| Vermont | 382.9 | 83.4 | 466.3 |
| West Virginia | 265.5 | 414.2 | 679.7 |
| Total 1997 | 6,782.6 | 2,529.6 | 9,312.2 |
| Total 1996 | 6,391.3 | 2,484.4 | 8,875.7 |
| Total 1995 | 6,784.6 | 2,628.4 | 9,413.0 |

^aCords are on a rough-wood basis, equivalent to 85 cubic feet of solid wood.

*Less than 50 cords.

Table 2.—Pulpwood production from roundwood in the Northeast, by state and softwood and hardwood, 1995, 1996, and 1997

| (In thousands of standard cords) | | | | | | | | | |
|----------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|
| State | Softwood | | | Hardwood | | | Total | | |
| | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 |
| Connecticut | 3.3 | 3.0 | 9.7 | * | * | 2.8 | 3.3 | 3.0 | 12.5 |
| Delaware | 29.9 | 50.7 | 22.4 | 5.0 | 9.9 | 7.3 | 34.9 | 60.6 | 29.7 |
| Maine | 1,443.9 | 1,389.2 | 1,589.4 | 1,940.5 | 1,587.4 | 1,898.4 | 3,384.4 | 2,976.6 | 3,487.8 |
| Maryland | 96.7 | 104.4 | 108.8 | 87.5 | 87.9 | 90.5 | 184.2 | 192.3 | 199.3 |
| Massachusetts | 13.6 | 11.8 | 16.3 | .3 | 1.2 | 1.3 | 13.9 | 13.0 | 17.6 |
| New Hampshire | 201.3 | 249.5 | 211.1 | 366.9 | 356.5 | 344.5 | 568.2 | 606.0 | 555.6 |
| New Jersey | .3 | 5.9 | 9.3 | .1 | .6 | 4.1 | .4 | 6.5 | 13.4 |
| New York | 321.2 | 297.4 | 243.7 | 366.6 | 365.5 | 493.0 | 687.8 | 662.9 | 736.7 |
| Ohio | 32.8 | 35.3 | 31.4 | 276.4 | 287.7 | 240.7 | 309.2 | 323.0 | 272.1 |
| Pennsylvania | 40.7 | 74.0 | 92.1 | 666.9 | 704.4 | 717.4 | 707.6 | 778.4 | 809.5 |
| Rhode Island | * | 4.3 | * | — | — | — | * | 4.3 | * |
| Vermont | 221.9 | 203.2 | 152.5 | 224.5 | 211.6 | 230.4 | 446.4 | 414.8 | 382.9 |
| West Virginia | 65.4 | 54.1 | 55.0 | 301.2 | 295.8 | 210.5 | 366.6 | 349.9 | 265.5 |
| Total | 2,471.0 | 2,482.8 | 2,541.7 | 4,235.9 | 3,908.5 | 4,240.9 | 6,706.9 | 6,391.3 | 6,782.6 |

*Less than 50 cords.

Table 3.—Pulpwood chip production from manufacturing residues in the Northeast, by state and softwood and hardwood, 1995, 1996, and 1997

(In thousands of standard cords)

| State | Softwood | | | Hardwood | | | Total | | |
|---------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|
| | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 | 1994 | 1995 | 1997 |
| Connecticut | — | — | — | 4.4 | 4.2 | .6 | 4.4 | 4.2 | .6 |
| Delaware | .9 | .6 | — | 2.8 | 2.9 | 3.1 | 3.7 | 3.5 | 3.1 |
| Maine | 732.3 | 755.4 | 827.1 | 91.9 | 56.8 | 56.7 | 824.2 | 812.2 | 883.8 |
| Maryland | 82.6 | 83.8 | 96.1 | 42.7 | 43.5 | 36.2 | 125.3 | 127.3 | 132.3 |
| Massachusetts | 8.4 | 3.5 | 4.6 | 5.9 | 4.7 | 3.4 | 14.3 | 8.2 | 8.0 |
| New Hampshire | 198.7 | 132.9 | 138.2 | 40.5 | 37.2 | 5.2 | 239.2 | 170.1 | 143.4 |
| New Jersey | — | — | — | 8.9 | 6.3 | 7.8 | * | 6.3 | 7.8 |
| New York | 55.5 | 23.5 | 34.5 | 180.2 | 159.4 | 174.2 | 235.7 | 182.9 | 208.7 |
| Ohio | 3.5 | 3.3 | 2.7 | 285.4 | 285.7 | 221.1 | 288.9 | 289.0 | 223.8 |
| Pennsylvania | 11.2 | 9.0 | 11.6 | 427.1 | 417.6 | 408.9 | 438.3 | 426.6 | 420.5 |
| Rhode Island | — | .1 | — | 1.9 | 1.0 | — | 1.9 | 1.1 | — |
| Vermont | 39.0 | 41.4 | 53.9 | 11.6 | 25.5 | 29.5 | 50.6 | 66.9 | 83.4 |
| West Virginia | 5.6 | 6.8 | 8.8 | 387.4 | 379.3 | 405.4 | 393.0 | 386.1 | 414.2 |
| Total | 1,137.7 | 1,060.3 | 1,177.5 | 1,490.7 | 1,424.1 | 1,352.1 | 2,619.5 | 2,484.4 | 2,529.6 |

*Less than 50 cords.

Table 4.—Pulpwood receipts from roundwood in the Northeast, by state and softwood and hardwood, 1995, 1996 and 1997

(In thousands of standard cords)

| State | Softwood | | | Hardwood | | | Total | | |
|---------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|
| | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 |
| Maine | 1,773.8 | 1,785.0 | 1,918.1 | 2,307.8 | 1,981.4 | 2,341.4 | 4,081.6 | 3,766.4 | 4,259.5 |
| Maryland | D | D | D | D | D | D | D | D | D |
| New Hampshire | D | D | D | D | D | D | D | D | D |
| New York | 527.3 | 471.0 | 375.7 | 296.3 | 295.8 | 318.3 | 823.6 | 766.8 | 694.0 |
| Ohio | 72.7 | 78.5 | 47.7 | 312.6 | 360.2 | 283.7 | 385.3 | 438.7 | 331.4 |
| Pennsylvania | 126.5 | 159.7 | 162.1 | 782.3 | 817.6 | 821.6 | 908.8 | 977.3 | 983.7 |
| Total | 2,723.0 | 2,705.5 | 2,708.1 | 4,272.0 | 4,004.3 | 4,386.8 | 6,995.0 | 6,709.8 | 7,094.9 |

D = Data withheld to avoid disclosure for individual mills.

Table 5.—Pulpwood chip receipts from manufacturing residues in the Northeast, by state and softwood and hardwood, 1995, 1996 and 1997

| (In thousands of standard cords) | | | | | | | | | |
|----------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|
| State | Softwood | | | Hardwood | | | Total | | |
| | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 | 1995 | 1996 | 1997 |
| Maine | 946.8 | 902.3 | 1,052.3 | 145.0 | 85.7 | 59.2 | 1,091.8 | 988.0 | 1,111.5 |
| Maryland | D | D | D | D | D | D | D | D | D |
| New Hampshire | D | D | D | D | D | D | D | D | D |
| New York | 79.2 | 58.8 | 73.7 | 125.3 | 105.4 | 112.9 | 204.5 | 164.2 | 186.6 |
| Ohio | 7.0 | 10.2 | 4.8 | 363.2 | 383.4 | 284.1 | 370.2 | 393.6 | 288.9 |
| Pennsylvania | 64.0 | 64.0 | 62.9 | 558.5 | 538.9 | 554.3 | 622.5 | 602.9 | 617.2 |
| Total | 1,275.7 | 1,192.5 | 1,238.3 | 1,321.8 | 1,262.4 | 1,134.3 | 2,597.5 | 2,454.9 | 2,372.6 |

D = Data withheld to avoid disclosure for individual mills.

Table 6.—Pulpwood production from roundwood in the Northeast, by state and species group, 1997 and totals by species for 1996 and 1995

| (In thousands of standard cords) | | | | | | |
|----------------------------------|----------------|----------------------|---------|---------|-----------------------------|-------------|
| State | Softwood | | | | Total hardwood ^a | All species |
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Connecticut | — | 9.3 | .4 | 9.7 | 2.8 | 12.5 |
| Delaware | — | — | 22.4 | 22.4 | 7.3 | 29.7 |
| Maine | 723.0 | 394.3 | 472.1 | 1,589.4 | 1,898.4 | 3,487.8 |
| Maryland | — | — | 108.8 | 108.8 | 90.5 | 199.3 |
| Massachusetts | .2 | 5.9 | 10.2 | 16.3 | 1.3 | 17.6 |
| New Hampshire | 57.8 | 58.2 | 95.1 | 211.1 | 344.5 | 555.6 |
| New Jersey | — | — | 9.3 | 9.3 | 4.1 | 13.4 |
| New York | 39.4 | 113.8 | 90.5 | 243.7 | 493.0 | 736.7 |
| Ohio | — | — | 31.4 | 31.4 | 240.7 | 272.1 |
| Pennsylvania | 1.6 | 2.8 | 87.7 | 92.1 | 717.4 | 809.5 |
| Rhode Island | * | — | — | * | — | * |
| Vermont | 67.4 | 37.0 | 48.1 | 152.5 | 230.4 | 382.9 |
| West Virginia | — | — | 55.0 | 55.0 | 210.5 | 265.5 |
| Total 1997 | 889.4 | 621.3 | 1,031.0 | 2,541.7 | 4,240.9 | 6,782.6 |
| Total 1996 | 988.8 | 689.7 | 804.3 | 2,482.8 | 3,908.5 | 6,391.3 |
| Total 1995 | 1,020.2 | 749.2 | 779.3 | 2,548.7 | 4,235.9 | 6,784.6 |

*Less than 50 cords.

^aPrevious reports divided hardwoods into three species groups. The authors believe that this breakout is inaccurate because many mills do not keep records with this amount of detail. This and future reports will report total hardwood volumes only.

Table 7.—Pulpwood production from roundwood in northern New England by state, county, and softwood and hardwood, 1997

| (In thousands of standard cords) | | | | | | |
|----------------------------------|-------------------|-------------------------|-------|---------|-------------------|----------------|
| County | Softwood | | | | Total hardwood | All species |
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| MAINE | | | | | | |
| Androscoggin | 4.7 | 7.5 | 24.9 | 37.1 | 18.6 | 55.7 |
| Aroostook | 89.1 | 47.9 | 2.4 | 139.4 | 148.0 | 287.4 |
| Cumberland | 2.0 | 16.1 | 34.6 | 52.7 | 19.8 | 72.5 |
| Franklin | 61.6 | 50.3 | 17.3 | 129.2 | 173.5 | 302.7 |
| Hancock | 60.9 | 10.2 | 7.5 | 78.6 | 60.2 | 138.8 |
| Kennebec | 12.8 | 15.7 | 25.1 | 53.6 | 38.9 | 92.5 |
| Knox | 24.9 | 2.0 | 6.5 | 33.4 | 12.4 | 45.8 |
| Lincoln | 12.8 | 2.6 | 13.9 | 29.3 | 7.1 | 36.4 |
| Oxford | 50.5 | 73.6 | 44.2 | 168.3 | 179.9 | 348.2 |
| Penobscot | 115.7 | 51.9 | 21.1 | 188.7 | 191.6 | 380.3 |
| Piscataquis | 112.8 | 23.2 | 8.0 | 144.0 | 317.1 | 461.1 |
| Sagadahoc | 2.2 | 2.6 | 6.9 | 11.7 | 3.7 | 15.4 |
| Somerset | 98.6 | 65.2 | 14.3 | 178.1 | 303.3 | 481.4 |
| Waldo | 42.1 | 7.8 | 11.8 | 61.7 | 48.5 | 110.2 |
| Washington | 31.7 | 4.2 | 7.2 | 43.1 | 358.5 | 401.6 |
| York | 0.6 | 13.5 | 226.4 | 240.5 | 17.3 | 257.8 |
| Total | 723.0 | 394.3 | 472.1 | 1,589.4 | 1,898.4 | 3,487.8 |
| NEW HAMPSHIRE | | | | | | |
| Belknap | .1 | 2.1 | 11.8 | 14.0 | 5.7 | 19.7 |
| Carroll | 1.4 | 11.5 | 28.1 | 41.0 | 38.7 | 79.7 |
| Cheshire | .0 | 1.7 | 3.6 | 5.3 | 4.2 | 9.5 |
| Coos | 48.4 | 6.6 | 8.4 | 63.4 | 164.5 | 227.9 |
| Grafton | 7.3 | 12.0 | 20.4 | 39.7 | 89.5 | 129.2 |
| Hillsborough | * | .3 | 3.4 | 3.7 | 11.5 | 15.2 |
| Merrimack | .1 | .6 | 0.5 | 1.2 | 14.6 | 15.8 |
| Rockingham | * | 1.1 | 8.9 | 10.0 | 2.0 | 12.0 |
| Strafford | .2 | 1.1 | 5.2 | 6.5 | 4.7 | 11.2 |
| Sullivan | .3 | 21.2 | 4.8 | 26.3 | 9.1 | 35.4 |
| Total | 57.8 | 58.2 | 95.1 | 211.1 | 344.5 | 555.6 |
| VERMONT | | | | | | |
| Addison | .1 | 1.1 | 0.9 | 2.1 | .3 | 2.4 |
| Bennington | .1 | .2 | 1.9 | 2.2 | 3.8 | 6.0 |
| Caledonia | 23.1 | 3.0 | 9.0 | 35.1 | 43.3 | 78.4 |
| Chittenden | .1 | .2 | 2.3 | 2.6 | 1.0 | 3.6 |
| Essex | 17.5 | .7 | 2.7 | 20.9 | 87.8 | 108.7 |
| Franklin | .1 | 4.4 | 2.0 | 6.5 | 16.5 | 23.0 |
| Grand Isle | * | .1 | — | 0.1 | * | 0.1 |
| Lamoille | 2.1 | 1.6 | 1.3 | 5.0 | 5.1 | 10.1 |
| Orange | 3.6 | 6.9 | 5.8 | 16.3 | 14.5 | 30.8 |
| Orleans | 12.9 | 7.6 | 5.4 | 25.9 | 33.8 | 59.7 |
| Rutland | .3 | 2.4 | 5.4 | 8.1 | 3.6 | 11.7 |
| Washington | 6.0 | 2.8 | 2.3 | 11.1 | 8.3 | 19.4 |
| Windham | .6 | 4.5 | 4.3 | 9.4 | 2.1 | 11.5 |
| Windsor | .9 | 1.5 | 4.8 | 7.2 | 10.3 | 17.5 |
| Total | 67.4 | 37.0 | 48.1 | 152.5 | 230.4 | 382.9 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 8.—Pulpwood production from roundwood in southern New England, by state, county, and softwood and hardwood, 1997

(In thousands of standard cords)

| County | Softwood | | | | Total | All species |
|---------------|----------------|----------------------|------|----------------|-------|-------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total hardwood | | |
| CONNECTICUT | | | | | | |
| Hartford | — | * | .3 | .3 | .1 | .4 |
| Litchfield | — | * | — | .0 | — | .0 |
| Middlesex | — | .1 | — | .1 | — | .1 |
| New London | — | * | * | .0 | — | .0 |
| Tolland | — | — | — | .0 | — | .0 |
| Windham | * | 9.2 | .1 | 9.3 | 2.7 | 12.0 |
| Total | .0 | 9.3 | .4 | 9.7 | * | 12.5 |
| MASSACHUSETTS | | | | | | |
| Berkshire | .2 | .2 | * | .2 | | |
| Essex | 1.2 | 1.2 | .2 | 1.4 | | |
| Franklin | .4 | * | .4 | * | .4 | |
| Hampden | 5.1 | * | 5.1 | .1 | 5.2 | |
| Hampshire | .0 | .1 | .1 | — | .1 | |
| Middlesex | * | .6 | .6 | .3 | .9 | |
| Plymouth | .0 | * | * | | | |
| Worcester | .2 | .3 | 8.2 | 8.7 | .7 | 9.4 |
| Total | .2 | 6.0 | 10.1 | 16.3 | 1.3 | 17.6 |
| RHODE ISLAND | | | | | | |
| Newport | * | — | | — | — | * |
| Total | * | — | | — | — | * |

* Less than 50 cords. Counties with no reported production are not listed.

Table 9.—Pulpwood production from roundwood in New York, by county and softwood and hardwood, 1997

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|--------------|----------------|----------------------|------|-------|----------------|-------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Albany | — | .4 | 1.0 | 1.4 | 1.2 | 2.6 |
| Alleghany | — | .1 | — | .1 | 3.7 | 3.8 |
| Bronx | * | — | .1 | .1 | .3 | .4 |
| Broome | .3 | .6 | .6 | 1.5 | 8.9 | 10.4 |
| Cattaraugus | — | — | 1.2 | 1.2 | 5.7 | 6.9 |
| Chautauqua | .3 | — | — | .3 | 8.3 | 8.3 |
| Chemung | — | — | .7 | .7 | 2.6 | 3.3 |
| Chenango | 1.2 | 2.6 | .1 | 3.9 | 2.1 | 6.0 |
| Clinton | 6.3 | 2.0 | 11.6 | 19.9 | 50.4 | 70.3 |
| Columbia | * | .5 | .3 | .8 | 2.1 | 2.9 |
| Cortland | 2.1 | .2 | — | 2.3 | 2.4 | 4.7 |
| Delaware | .3 | 1.6 | .4 | 2.3 | 3.2 | 5.5 |
| Dutchess | .1 | * | .1 | * | .1 | |
| Essex | .9 | 13.9 | 12.9 | 27.7 | 31.8 | 59.5 |
| Franklin | 11.2 | 5.6 | 3.8 | 20.6 | 60.5 | 81.1 |
| Fulton | .7 | 9.4 | 7.1 | 17.2 | 12.2 | 29.4 |
| Greene | — | 1.2 | .2 | 1.4 | .4 | 1.8 |
| Hamilton | 2.8 | 6.0 | 1.6 | 10.4 | 38.6 | 49.0 |
| Herkimer | 1.2 | 3.0 | .1 | 4.3 | 6.9 | 11.2 |
| Jefferson | .3 | 1.3 | .2 | 1.8 | 3.3 | 5.1 |
| Lewis | 2.8 | 3.6 | .1 | 6.5 | 29.8 | 36.3 |
| Madison | .4 | .4 | * | .8 | .2 | 1.0 |
| Monroe | .1 | * | 1.2 | 1.3 | .3 | 1.6 |
| Montgomery | .6 | .6 | — | 1.2 | .9 | 2.1 |
| New York | — | — | — | — | 1.7 | 1.7 |
| Oneida | 1.3 | 2.3 | .1 | 3.7 | 6.8 | 10.5 |
| Onondaga | .9 | .5 | * | 1.4 | .3 | 1.7 |
| Oswego | — | 4.0 | — | 4.0 | 3.3 | 7.3 |
| Otsego | 1.5 | 2.4 | 1.0 | 4.9 | 1.0 | 5.9 |
| Rensselaer | * | 3.4 | 1.2 | 4.6 | 8.3 | 12.9 |
| Rockland | — | * | — | * | — | * |
| St. Lawrence | 1.9 | 15.1 | 5.9 | 22.9 | 137.5 | 160.4 |
| Saratoga | .3 | 10.4 | 19.0 | 29.7 | 23.0 | 52.7 |
| Schenectady | * | .1 | .2 | .3 | .2 | .5 |
| Schoharie | 1.3 | 1.6 | 2.1 | 5.0 | 1.1 | 6.1 |
| Schuyler | .3 | — | .3 | .6 | — | .6 |
| Stueben | — | — | — | — | .4 | .4 |
| Sullivan | — | .4 | — | .4 | 1.0 | 1.4 |
| Tioga | * | .3 | .3 | 1.7 | 2.0 | |
| Tompkins | — | — | — | — | 1.3 | 1.3 |
| Ulster | — | .4 | * | .4 | * | .4 |
| Warren | .4 | 13.2 | 13.1 | 26.7 | 23.0 | 49.7 |
| Washington | — | 6.9 | 4.1 | 11.0 | 6.6 | 17.6 |
| Total | 39.4 | 113.8 | 90.5 | 243.7 | 493.0 | 736.4 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 10.—Pulpwood production from roundwood in Delaware, Maryland, and New Jersey, by county and softwood and hardwood, 1997

| (In thousands of standard cords) | | | | | | |
|----------------------------------|-------------------|----------------------------|-------|-------|-------------------|----------------|
| County | Softwood | | | | Total hardwood | All species |
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| DELAWARE | | | | | | |
| Sussex | — | — | 22.4 | 22.4 | 7.3 | 29.7 |
| Total | — | — | 22.4 | 22.4 | 7.3 | 29.7 |
| MARYLAND | | | | | | |
| Allegany | — | — | 4.7 | 4.7 | 21.1 | 25.8 |
| Anne Arundel | — | — | 5.5 | 5.5 | 2.5 | 8.0 |
| Baltimore | — | — | 0.5 | .5 | 5.7 | 6.2 |
| Calvert | — | — | 1.4 | 1.4 | 0.1 | 1.5 |
| Caroline | — | — | 3.8 | 3.8 | 0.5 | 4.3 |
| Carroll | — | — | 0.8 | .8 | 1.2 | 2.0 |
| Charles | — | — | 14.7 | 14.7 | 3.1 | 17.8 |
| Dorchester | — | — | 4.5 | 4.5 | 0.6 | 5.1 |
| Frederick | — | — | 2.3 | 2.3 | 2.5 | 4.8 |
| Garrett | — | — | 5.3 | 5.3 | 28.6 | 33.9 |
| Harford | — | — | * | * | 0.6 | .6 |
| Howard | — | — | 0.1 | .1 | 0.7 | .8 |
| Kent | — | — | .1 | .1 | .1 | |
| Montgomery | — | — | 0.2 | .2 | 0.8 | 1.0 |
| Prince George | — | — | 1.0 | 1.0 | 2.3 | 3.3 |
| Queen Anne | — | — | — | — | * | .0 |
| St. Marys | — | — | 3.9 | 3.9 | 0.4 | 4.3 |
| Somerset | — | — | 16.9 | 16.9 | 4.0 | 20.9 |
| Talbot | — | — | — | — | 0.1 | .1 |
| Washington | — | — | — | — | 0.8 | .8 |
| Wicomico | — | — | 20.9 | 20.9 | 6.0 | 26.9 |
| Worcester | — | — | 22.2 | 22.2 | 8.9 | 31.1 |
| Total | — | — | 108.8 | 108.8 | 90.5 | 199.3 |
| NEW JERSEY | | | | | | |
| Atlantic | — | — | 0.6 | .6 | 0.3 | 0.9 |
| Burlington | — | — | 4.0 | 4.0 | 0.1 | 4.1 |
| Cape May | — | — | 0.2 | .2 | — | 0.2 |
| Cumberland | — | — | — | — | * | * |
| Gloucester | — | — | 4.0 | 4.0 | 1.6 | 5.6 |
| Hunterdon | — | — | — | — | 0.1 | 0.1 |
| Monmouth | — | — | — | — | 0.1 | 0.1 |
| Morris | — | — | — | — | 0.2 | 0.2 |
| Ocean | — | — | — | .5 | * | 0.5 |
| Sussex | — | — | — | — | 1.7 | 1.7 |
| Total | — | — | 8.8 | 9.3 | 4.1 | 13.4 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 11.—Pulpwood production from roundwood in Pennsylvania, by county and softwood and hardwood, 1997

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|------------|----------------|----------------------|------|-------|----------------|-------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Adams | — | — | 2.6 | 2.6 | 4.4 | 7.0 |
| Allegheny | — | — | — | — | 1.4 | 1.4 |
| Armstrong | — | — | — | — | 12.5 | 12.5 |
| Bedford | — | — | 5.0 | 5.0 | 18.6 | 23.6 |
| Berks | — | — | .1 | .1 | 1.5 | 1.6 |
| Blair | — | — | .5 | .5 | 8.7 | 9.2 |
| Bradford | — | — | 5.0 | 5.0 | 15.9 | 20.9 |
| Bucks | — | — | .1 | .1 | .1 | .2 |
| Butler | — | — | — | — | 3.6 | 3.6 |
| Cambria | — | — | .2 | .2 | 17.0 | 17.2 |
| Cameron | — | — | — | — | 8.0 | 8.0 |
| Carbon | — | — | .6 | .6 | 3.9 | 4.5 |
| Centre | .1 | .2 | 3.0 | 3.3 | 15.3 | 18.6 |
| Chester | — | — | * | — | .2 | .2 |
| Clarion | — | — | — | — | 2.7 | 2.7 |
| Clearfield | — | — | 9.7 | 9.7 | 56.0 | 65.7 |
| Clinton | — | — | 2.2 | 2.2 | 18.6 | 20.8 |
| Columbia | — | — | .2 | .2 | 4.5 | 4.7 |
| Crawford | — | — | — | — | 2.8 | 2.8 |
| Cumberland | — | — | .6 | .6 | 2.4 | 3.0 |
| Dauphin | — | — | 1.7 | 1.7 | 6.7 | 8.4 |
| Delaware | — | — | .2 | .2 | — | .2 |
| Elk | — | — | .2 | .2 | 40.2 | 40.4 |
| Erie | — | — | — | — | 1.8 | 1.8 |
| Fayette | — | — | — | — | 1.0 | 1.0 |
| Forest | — | — | — | — | 48.7 | 48.7 |
| Franklin | — | — | .4 | .4 | 11.0 | 11.4 |
| Fulton | — | — | 7.2 | 7.2 | 5.5 | 12.7 |
| Greene | — | — | — | .8 | .8 | |
| Huntingdon | .1 | .1 | 7.0 | 7.2 | 16.7 | 23.9 |
| Indiana | — | — | .3 | .3 | 8.9 | 9.2 |
| Jefferson | — | — | .8 | .8 | 20.1 | 20.9 |
| Juniata | — | — | 4.4 | 4.4 | 3.4 | 7.8 |
| Lackawanna | — | — | — | 4.7 | 4.7 | |
| Lancaster | — | — | * | * | 6.0 | 6.0 |
| Lawrence | — | — | — | — | 5.6 | 5.6 |
| Lebanon | — | — | .3 | .3 | 2.0 | 2.3 |
| Luzerne | — | .1 | 1.2 | 1.3 | 8.5 | 9.8 |
| Lycoming | — | — | 3.4 | 3.4 | 8.8 | 12.2 |
| Mckean | — | — | — | — | 58.0 | 58.0 |
| Mercer | — | — | — | — | 5.7 | 5.7 |
| Mifflin | .3 | .3 | 2.1 | 2.7 | 11.9 | 14.6 |
| Monroe | * | .1 | .2 | .3 | 4.4 | 4.7 |
| Montgomery | — | — | .1 | .1 | — | .1 |
| Montour | — | — | .7 | .7 | * | .7 |

Continued

Table 11.—Continued

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|----------------|-------------------|----------------------------|------|-------|-------------------|----------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Northumberland | — | — | 2.0 | 2.0 | 1.2 | 3.2 |
| Perry | — | — | 7.3 | 7.3 | 1.0 | 8.3 |
| Pike | — | — | .1 | .1 | 6.2 | 6.3 |
| Potter | — | — | — | — | 51.6 | 51.6 |
| Schuylkill | .9 | 1.3 | 3.6 | 5.8 | 34.3 | 40.1 |
| Snyder | — | — | .9 | .9 | .7 | 1.6 |
| Somerset | — | — | 1.3 | 1.3 | 20.3 | 21.6 |
| Sullivan | .2 | .2 | 3.6 | 4.0 | 30.8 | 34.8 |
| Susquehanna | — | .3 | 2.8 | 3.1 | 14.4 | 17.5 |
| Tioga | — | — | 1.7 | 1.7 | 13.8 | 15.5 |
| Union | — | — | .5 | .5 | * | .5 |
| Venango | — | — | — | — | 5.0 | 5.0 |
| Warren | — | — | — | — | 29.8 | 29.8 |
| Washington | — | — | — | — | .2 | .2 |
| Wayne | — | .2 | .5 | .7 | 8.8 | 9.5 |
| Westmoreland | — | — | — | — | 2.4 | 2.4 |
| Wyoming | — | — | .8 | .8 | 11.6 | 12.4 |
| York | — | — | 2.6 | 2.6 | 6.8 | 9.4 |
| Total | 1.9 | 3.2 | 90.1 | 95.2 | 797.4 | 892.6 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 12.—Pulpwood production from roundwood in West Virginia, by county and softwood and hardwood, 1997

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|------------|-------------------|----------------------------|------|-------|-------------------|----------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Barbour | — | — | — | — | 1.1 | 1.1 |
| Berkeley | — | — | 2.6 | 2.6 | 6.7 | 9.3 |
| Boone | — | — | .1 | .1 | 1.7 | 1.8 |
| Braxton | — | — | — | — | * | * |
| Doddridge | — | — | * | * | .6 | .6 |
| Grant | — | — | .1 | .1 | 4.7 | 4.8 |
| Greenbrier | — | — | 1.8 | 1.8 | 6.6 | 8.4 |
| Hampshire | — | — | 7.8 | 7.8 | 10.8 | 18.6 |
| Hardy | — | — | 4.0 | 4.0 | 8.2 | 12.2 |
| Harrison | — | — | — | — | .1 | .1 |
| Jackson | — | — | 4.6 | 4.6 | .5 | 5.1 |
| Lewis | — | — | — | — | .1 | .1 |
| Marion | — | — | — | — | 1.5 | 1.5 |
| Marshall | — | — | — | — | .2 | .2 |
| Mason | — | — | 3.0 | 3.0 | .1 | 3.1 |
| Mercer | — | — | .5 | .5 | .9 | 1.4 |
| Mineral | — | — | 1.9 | 1.9 | 11.7 | 13.6 |
| Monongalia | — | — | — | — | 1.9 | 1.9 |
| Monroe | — | — | 2.8 | 2.8 | 8.7 | 11.5 |
| Morgan | — | — | 3.6 | 3.6 | 3.8 | 7.4 |
| Nicholas | — | — | .6 | .6 | 40.5 | 41.1 |
| Pendleton | — | — | 4.2 | 4.2 | 14.7 | 18.9 |
| Pleasants | — | — | .5 | .5 | .2 | .7 |
| Pocahontas | — | — | .5 | .5 | 7.2 | 7.7 |
| Preston | — | — | .7 | .7 | 13.5 | 14.2 |
| Putnam | — | — | 8.7 | 8.7 | 10.0 | 18.7 |
| Raleigh | — | — | * | * | 8.6 | 8.6 |
| Randolph | — | — | .1 | .1 | 23.8 | 23.9 |
| Ritchie | — | — | 1.6 | 1.6 | 10.0 | 11.6 |
| Roane | — | — | .3 | .3 | .5 | .8 |
| Summers | — | — | .1 | .1 | 2.1 | 2.2 |
| Tucker | — | — | .1 | .1 | 3.5 | 3.6 |
| Tyler | — | — | — | — | 1.3 | 1.3 |
| Webster | — | — | — | — | .0 | |
| Wirt | — | — | 4.8 | 4.8 | 4.6 | 9.4 |
| Wyoming | — | — | — | — | .1 | .1 |
| Total | — | — | 55.0 | 55.0 | 210.5 | 265.5 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 13.—Pulpwood production from roundwood in Ohio, by county and softwood and hardwood, 1997

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|------------|-------------------|----------------------------|------|-------|-------------------|----------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Adams | — | — | 0.1 | .1 | 2.7 | 2.8 |
| Ashland | — | — | — | — | .5 | .5 |
| Ashtabula | — | — | — | — | .8 | .8 |
| Athens | — | — | .9 | .9 | 2.2 | 3.1 |
| Belmont | — | — | .6 | .6 | 2.0 | 2.6 |
| Carroll | — | — | — | — | 2.5 | 2.5 |
| Columbiana | — | — | — | — | 10.5 | 10.5 |
| Coshocton | — | — | — | — | 23.1 | 23.1 |
| Crawford | — | — | — | — | .9 | .9 |
| Cuyahoga | — | — | — | — | 4.0 | 4.0 |
| Delaware | — | — | — | — | .8 | .8 |
| Fairfield | — | — | .4 | .4 | .2 | .6 |
| Franklin | — | — | — | — | .4 | .4 |
| Fulton | — | — | — | — | 4.9 | 4.9 |
| Gallia | — | — | .9 | .9 | 4.3 | 5.2 |
| Geauga | — | — | — | — | * | * |
| Greene | — | — | — | — | 8.2 | 8.2 |
| Guernsey | — | — | — | — | 5.3 | 5.3 |
| Hamilton | — | — | — | — | .1 | .1 |
| Harrison | — | — | 1.1 | 1.1 | 6.2 | 7.3 |
| Highland | — | — | .0 | 3.2 | 3.2 | |
| Hocking | — | — | .7 | .7 | 5.4 | 6.1 |
| Holmes | — | — | — | — | 2.6 | 2.6 |
| Huron | — | — | — | — | * | * |
| Jackson | — | — | 3.2 | 3.2 | 31.3 | 34.5 |
| Jefferson | — | — | — | — | 3.7 | 3.7 |
| Knox | — | — | — | — | .1 | .1 |
| Lake | — | — | — | — | 4.3 | 4.3 |
| Lawrence | — | — | .5 | .5 | 3.3 | 3.8 |
| Licking | — | — | — | — | 3.8 | 3.8 |
| Lorain | — | — | — | — | 1.5 | 1.5 |
| Lucas | — | — | — | — | .3 | .3 |
| Mahoning | — | — | — | — | 1.0 | 1.0 |
| Medina | — | — | — | — | 2.5 | 2.5 |
| Meigs | — | — | 5.5 | 5.5 | 1.7 | 7.2 |
| Mercer | — | — | 4.5 | 4.5 | 9.5 | 14.0 |
| Morgan | — | — | 2.4 | 2.4 | 5.1 | 7.5 |
| Morrow | — | — | — | — | .4 | .4 |
| Muskingum | — | — | 3.2 | 3.2 | 6.5 | 9.7 |
| Noble | — | — | — | — | 1.1 | 1.1 |
| Ottawa | — | — | — | — | * | * |
| Perry | — | — | — | — | 1.3 | 1.3 |
| Pike | — | — | 2.1 | 2.1 | 13.4 | 15.5 |
| Portage | — | — | — | — | .8 | .8 |
| Richland | — | — | — | — | .6 | .6 |

Continued

Table 13.—Continued

(In thousands of standard cords)

| County | Softwood | | | | Total hardwood | All species |
|------------|-------------------|----------------------------|------|-------|-------------------|----------------|
| | Spruce and fir | Hemlock and tamarack | Pine | Total | | |
| Ross | — | — | .1 | .1 | 8.8 | 8.9 |
| Sandusky | — | — | — | — | * | * |
| Scioto | — | — | 1.6 | 1.6 | 21.0 | 22.6 |
| Summit | — | — | — | — | 6.5 | 6.5 |
| Trumbull | — | — | — | — | 6.4 | 6.4 |
| Union | — | — | — | — | .3 | .3 |
| Vinton | — | — | .4 | .4 | 10.3 | 10.7 |
| Washington | — | — | 3.0 | 3.0 | 2.2 | 5.2 |
| Wayne | — | — | .2 | .2 | 2.2 | 2.4 |
| Total | — | — | 31.4 | 31.4 | 240.7 | 272.1 |

*Less than 50 cords. Counties with no reported production are not listed.

Table 14.—Production and receipts of pulpwood in the Northeast, by state and softwood and hardwood, 1997, and totals for 1996 and 1995

(In thousands of standard cords)

| State | Produced in state | | Received in state | |
|---------------|-------------------|----------|-------------------|----------|
| | Softwood | Hardwood | Softwood | Hardwood |
| Connecticut | 9.7 | 3.4 | 0 | 0 |
| Delaware | 22.4 | 10.4 | 0 | 0 |
| Maine | 2,416.5 | 1,955.1 | 2,970.4 | 2,400.6 |
| Maryland | 204.9 | 126.7 | 183.9 | 332.0 |
| Massachusetts | 20.9 | 4.7 | 0 | 0 |
| New Hampshire | 349.3 | 349.7 | 65.2 | 413.6 |
| New Jersey | 9.3 | 11.9 | 0 | 0 |
| New York | 278.2 | 667.2 | 449.4 | 431.2 |
| Ohio | 34.1 | 461.8 | 52.5 | 567.8 |
| Pennsylvania | 103.7 | 1,126.3 | 225.0 | 1,375.9 |
| Rhode Island | — | — | 0 | 0 |
| Vermont | 206.4 | 259.9 | 0 | 0 |
| West Virginia | 63.8 | 615.9 | 0 | 0 |
| Total 1997 | 3,719.2 | 5,593.0 | 3,946.4 | 5,521.1 |
| Total 1996 | 3,543.1 | 5,332.6 | 3,898.0 | 5,266.7 |
| Total 1995 | 3,686.4 | 5,726.6 | 3,998.7 | 5,593.8 |

Table 15.—Balance of pulpwood shipments into and out of states, 1995, 1996, and 1997

| State | 1995 Net export (+) import (-) | 1996 Net export (+) import (-) | 1997 Net export (+) import (-) |
|---------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Connecticut | +7.4 | +7.2 | +13.1 |
| Delaware | +23.8 | +64.1 | +32.8 |
| Maine | -883.8 | -965.6 | -999.4 |
| Maryland | -212.0 | -214.7 | -184.3 |
| Massachusetts | +26.6 | +21.2 | +25.6 |
| New Hampshire | +250.0 | +243.6 | +220.2 |
| New Jersey | +9.2 | +12.8 | +21.2 |
| New York | -116.1 | -85.2 | +64.8 |
| Ohio | -152.7 | -220.3 | -124.4 |
| Pennsylvania | -360.8 | -375.2 | -370.9 |
| Rhode Island | +2.3 | +5.4 | +0.0 |
| Vermont | +461.1 | +481.7 | +466.3 |
| West Virginia | +765.5 | +736.0 | +679.7 |
| Northeast | -179.5 | -289.0 | -187.1 |

Table 16.—Imports of roundwood into the Northeast, by state (or province) of origin, state of consumption, and softwood and hardwood, 1995, 1996, and 1997

| (In thousands of standard cords) | | | | | | | | | | |
|----------------------------------|--------------------------------|----------|----------|-------|----------|----------|-------|----------|----------|-------|
| Receiving state | State or province of origin | 1995 | | | 1996 | | | 1997 | | |
| | | Softwood | Hardwood | Total | Softwood | Hardwood | Total | Softwood | Hardwood | Total |
| Maine | Mississippi | — | — | — | — | — | — | * | — | * |
| | New Brunswick | 34.1 | 195.3 | 229.4 | 35.2 | 231.2 | 266.4 | 8.9 | 351.4 | 360.3 |
| | Nova Scotia | — | — | — | — | — | — | 5.8 | — | 5.8 |
| | Ontario | — | — | — | — | 1.1 | 1.1 | .4 | — | .4 |
| | Quebec | 33.5 | 35.6 | 69.1 | 71.1 | 15.5 | 86.6 | 73.2 | 24.7 | 97.9 |
| Maryland | Virginia | 77.4 | 24.7 | 102.1 | 86.8 | 16.3 | 103.1 | 70.3 | 24.3 | 94.6 |
| New Hampshire | Quebec | * | .5 | .5 | 1.0 | 1.2 | 2.2 | .1 | 4.7 | 4.8 |
| New York | Nova Scotia | — | — | — | .5 | — | .5 | — | — | .5 |
| | Ontario | .3 | — | .3 | 11.8 | — | 11.8 | .5 | — | 23.4 |
| | Quebec | 32.6 | .3 | 32.9 | 24.4 | * | 24.4 | 23.4 | .4 | 23.8 |
| Ohio | Georgia | 4.0 | * | 4.0 | 13.9 | * | 13.9 | — | — | — |
| | Indiana | — | — | — | — | — | — | — | .2 | .2 |
| | Iowa | 5.3 | .1 | 5.4 | — | — | — | — | — | — |
| | Kentucky | 9.9 | 47.5 | 57.4 | 11.2 | 63.7 | 74.9 | 7.9 | 35.1 | 43.0 |
| | South Carolina | — | — | — | — | — | — | — | — | .0 |
| | Tennessee | — | — | — | 1.4 | .2 | 1.6 | .5 | — | .5 |
| | Virginia | — | — | — | 2.2 | — | 2.2 | * | — | * |
| Pennsylvania | Virginia | 49.0 | 4.3 | 53.3 | 43.5 | 6.7 | 50.2 | 49.2 | 10.6 | 59.8 |
| Total | | 240.8 | 308.2 | 549.0 | 303.0 | 335.9 | 638.9 | 245.5 | 451.5 | 720.4 |

Table 17.—Imports of manufacturing residues used for pulp into the Northeast, by state (or province) of origin, state of consumption, and softwood and hardwood, 1995, 1996, and 1997

| (In thousands of standard cords) | | | | | | | | | | |
|----------------------------------|-----------------------------|----------|----------|-------|----------|----------|-------|----------|----------|-------|
| Receiving state | State or province of origin | 1995 | | | 1996 | | | 1997 | | |
| | | Softwood | Hardwood | Total | Softwood | Hardwood | Total | Softwood | Hardwood | Total |
| Maine | New Brunswick | 46.4 | 3.8 | 50.2 | 201.0 | 1.2 | 202.2 | 93.7 | 1.8 | 95.5 |
| | Quebec | 157.1 | 5.7 | 162.8 | 171.9 | 2.6 | 174.5 | 71.1 | — | 71.1 |
| Maryland | Virginia | 9.2 | .7 | 9.9 | 9.5 | 4.8 | 14.3 | 9.4 | 3.2 | 12.6 |
| New Hampshire | Quebec | 5.9 | .8 | 6.7 | — | — | — | — | — | — |
| New York | Quebec | 10.1 | 3.9 | 14.0 | — | — | — | — | — | — |
| Ohio | Indiana | — | 2.3 | 2.3 | — | — | — | — | 1.4 | — |
| | Kentucky | 3.0 | 39.0 | 42.0 | 5.1 | 64.5 | 69.6 | 2.1 | 48.9 | 51.0 |
| Pennsylvania | Virginia | 3.7 | 14.8 | 18.5 | 3.9 | 14.1 | 18.0 | 2.8 | 15.9 | 18.7 |
| Total | | 235.4 | 71.0 | 306.4 | 391.4 | 87.2 | 478.6 | 179.1 | 71.2 | 248.9 |

Table 18.—Harvest intensity: average annual pulpwood roundwood removals per acre of timberland in the Northeast, 1997

| State | Timberland ^a | Average pulpwood harvest | Average harvest per acre ^b |
|---------------|-------------------------|--------------------------|---------------------------------------|
| | <i>Acres</i> | <i>Cords</i> | <i>Cubic feet</i> |
| Connecticut | 1,777,300 | 12,500 | 0.60 |
| Delaware | 376,400 | 29,700 | 6.71 |
| Maine | 16,937,700 | 3,487,800 | 17.50 |
| Maryland | 2,424,000 | 199,300 | 6.99 |
| Massachusetts | 2,952,000 | 17,600 | 0.51 |
| New Hampshire | 4,812,100 | 555,600 | 9.81 |
| New Jersey | 1,857,000 | 13,400 | 0.61 |
| New York | 15,405,500 | 736,700 | 4.06 |
| Ohio | 7,567,400 | 272,100 | 3.06 |
| Pennsylvania | 15,872,800 | 809,500 | 4.33 |
| Rhode Island | 371,700 | * | NA |
| Vermont | 4,422,100 | 382,900 | 7.36 |
| West Virginia | 11,917,700 | 265,500 | 1.89 |
| Total | 86,693,700 | 6,782,600 | 6.65 |

^aMost recent estimates of timberland by USDA Forest Service.

^bConversion factor is 85 cubic feet per cord.



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